SPECIFICATION: Clean version und r 37 C.F.R. 1.121(b)(1)(ii)—Page 60

--components in the test sample are washed away. Specifically-bound IgG reacts with a biotinylated anti-human IgG monoclonal antibody bound with streptavidin-horseradish peroxidase (HRP) during a second incubation period. Following a second wash cycle, specifically-bound enzyme conjugate is detected by reaction with hydrogen peroxide and the chromogen tetramethylbenzidine (TMB). The assay is measured spectrophotometrically to indicate the presence of IgG treponemal antibodies.

B1

4.14 Intelligent Programming Algorithm: The concept of the algorithm from a systems point of view is described in FIG. 18. The result is compared by the computer with a rule which tells it whether and what test to order next In the sequence. The nature of the rule depends on whether the nth assay generates a qualitative result (positive, negative or equivocal) or a quantitative (numerical) result. In the latter case actual results may be compared with the "reference range" for the healthy population.

This reference range can be developed in several different ways although CLS currently uses a curve fit routine (H. Martin et al, Normal Values in Clinical Chemistry (New York: Marcel Dekker, 1975). On the basis of the qualitative result or by comparison of the patient result with the reference range, the computer will stop or order the appropriate (n+1)st assay in the sequence.

In the present invention, the rules are applied through an expert system which is an intrinsic part of the architecture of the laboratory computer system. This expert system is an event-driven, expert rule based, decision-support software within the Cerner system.--